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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,749	10/12/2001	Safwat E. Tadros	08CV07409-1 (GP3-0039)	8016

7590 07/14/2003

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EXAMINER	
BISSETT, MELANIE D	

ART UNIT	PAPER NUMBER
1711	11

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/682,749	TADROS ET AL.	
	Examiner	Art Unit	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this c mmunication appears on the c ver sheet with the c rrespondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-18 and 20-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-18,20-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. The rejections based on 35 USC 112 have been withdrawn based on the applicant's amendments. To clarify, the examiner will now interpret the "alkyl moiety" limitation as limiting all of the hydroxyalkyl, aminoalkyl, and the hydroxyl- and amino-substituted alkyl group. Also, the limitation of "containing an oxygen, sulphur, or nitrogen atom" will be interpreted as limiting only the aromatic heterocyclic group having 5 or 6 carbon atoms.

2. The objections to the claims have been withdrawn based on the applicant's amendment. However, it is suggested that claim 22 be amended to omit the redundant clause "comprising blow molding a composition".

3. The rejection based on 35 USC 103 has been altered.

4. Also note that the independent claim has been amended to cite an upper layer "consisting essentially of" a number of components. Because polycarbonate is taught by the applicant to decrease weatherability of the material, it is the examiner's position that polycarbonate materials are excluded from the upper layer composition in the claim.

Claim Rejections - 35 USC § 103

5. Claims 2-18 and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacGregor et al. in view of Susi.

6. MacGregor discloses multi-layer plastic composites comprising a substrate, including polycarbonate, and at least one layer of cycloaliphatic polyester, where decorative layers can be located between the substrate and surface layer (abstract).

The reference indicates that the cycloaliphatic polyester resin itself may be colored or modified to be the decorative layer (col. 1 lines 39-46). Polyester resins include those which match the applicant's claimed formula (col. 4 lines 27-45), where a polyester having cyclohexane structures as part of the R groups is preferred (col. 4 lines 46-59). MacGregor teaches the use of triazine UV absorbers and hindered amine light stabilizers (HALS), indicating a useful amount of UV absorber as 0.05-10% by weight (col. 6 lines 20-67). The substrate film and surface layers may be coextruded, or blow molded (col. 10 lines 40-58). However, MacGregor does not specifically teach a low-volatility, hydroxyphenyl-triazine UV absorber or teach the applicant's specified UV absorber and HALS structures. Also, MacGregor does not specifically suggest the use of a PCCD decorative layer as an intermediate layer.

7. Regarding the intermediate layer, the cycloaliphatic polyester materials of the invention are shown to have improved weatherability and solvent resistance. The reference teaches that intermediate layers may be incorporated as decorative layers and also that cycloaliphatic polyester materials may be colored or modified to act as a decorative layer. It is the examiner's position that it would have been prima facie obvious to apply more than one layer of the cycloaliphatic polyester composition to amplify the weatherability and solvent resistant properties of the film. The result would be a multi-layered structure having an intermediate and upper layer both comprising cycloaliphatic polyester.

8. From a prior Office action:

> 14. Susi discloses a method of stabilizing polymer film coatings or molded articles against light by incorporating a mixture of a tris-aryl-s-triazine UV absorber and HALS compound into a polymer

binder (abstract). The UV absorber has at least one hydroxyphenyl group. Polyester is noted as a binder polymer (col. 4 lines 48-57). Susi teaches the use of oligomer substituted piperidine HALS (col. 8 line 49-col. 9 line 35), HALS compounds fitting the applicant's claimed formula of claim 5 (col. 5 lines 20-51), and HALS compounds fitting the applicant's formula of claim 6 (col. 9 line 65-col. 11 line 24) in an amount of 0.01-5% by weight based on binder solids. The mixture of UV absorber and HALS compound provides improved gloss retention and weatherability compared to the use of individual additives (examples). Since MacGregor expressed interest in gloss retention and weatherability properties, it is the examiner's position that it would have been prima facie obvious to use an additive mixture by Susi's invention in the invention of MacGregor to further improve gloss retention and weatherability properties.

15. Regarding claim 19 limiting the intermediate layer to contain an additive, it is noted that MacGregor does not specifically teach incorporating an additive into an intermediate layer. However, the reference does teach colored and modified intermediate layers (col. 1 lines 38-46; col. 10 lines 40-54) and also suggests the use of additives in the substrate resin for coloration purposes (col. 10 lines 35-39). It is well known in the art to use dyes or pigments, including TiO_2, to color polymeric binders and form decorative layers. Therefore, it is the examiner's position that it would have been prima facie obvious to include dyes or pigments in the intermediate layer of MacGregor to provide a desired color or appearance in the decorative layer.

16. Regarding claim 9, Susi teaches a general tris-aryl-s-triazine formula (I), where certain species are preferred. Note that preferred compound (XIVB) is similar to the applicant's claimed formula, where Susi's compound has methyl substituents on two of the phenyl groups instead of one phenyl group. Susi's general formula (I) indicates that the substituents may be hydrogen atoms. It is the examiner's position that, given the similarity of the structures, the use of the applicant's claimed UV absorber, which is encompassed by Susi's formula (I), would provide equivalent results to the preferred compound of formula (XIVB). Therefore, it is the examiner's position that it would have been prima facie obvious to use a compound fitting the applicant's formula in Susi's invention in the expectancy of providing equally improved gloss retention and weatherability properties.

17. Regarding the claimed gloss, change in gloss, and change in color properties, MacGregor teaches PCCD laminates having a gloss of 99.7 after irradiation, with a change in gloss of about 8%. However, the testing conditions may differ from those of the applicant's claimed properties. Also, MacGregor does not teach change in color in the applicant's claimed range. It is the examiner's position that the combination of MacGregor's laminate using Susi's UV stabilizer mixture would encompass the applicant's claimed specific UV additives and laminate structure. Susi teaches the combination of specific UV absorbers and HALS as especially beneficial for improving gloss and weathering properties. Since similar articles would have similar properties, it is the examiner's position that the combination of MacGregor's laminate using Susi's UV stabilizer mixture would possess the applicant's claimed gloss and weathering properties.

Response to Arguments

9. Regarding the applicant's argument that the reference does not teach the significance of an intermediate layer as having improved weatherability, it is noted that the reference teaches the improved weatherability of the cycloaliphatic polyester materials. It has been the examiner's position that it would have been obvious to use cycloaliphatic polyester as both the intermediate and upper layers to amplify the weatherability properties. Thus, the improvement in weatherability due to the use of cycloaliphatic polyester is known in the art.

10. In response to the applicant's arguments of unexpected results, it is again noted that the improvement in weatherability due to the use of cycloaliphatic polyester is known in the art. The reference differs from the present independent claim by lacking specific suggestion of multiple layers of cycloaliphatic polyester and lacking suggestion of hydroxyphenyl-triazine or –pyrimidine. The examples cited by the applicant, formulations 3 and 6, differ from the claimed invention by using a different intermediate layer and by using the same upper layer without an intermediate layer. However, these examples are not commensurate in scope with the claims, since only one polymer and one UV absorber is exemplified. A trend cannot be observed from only one comparative composition. Unexpected benefits of using the claimed UV absorber over those shown in MacGregor, col. 6 lines 37-51 do not appear to have been given.

11. Regarding the applicant's argument that Suzi does not teach an intermediate layer, it is noted that Susi has been used as a secondary reference to provide teaching

of a UV absorber. It is the examiner's position that it would have been obvious to include an intermediate layer based on the primary reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb
July 3, 2003

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700